

$C-C(=O)R'$ ,  $C-C(=O)OR'$ ,  $C(CH_2)_qOR'$ ,  $C-OC(=O)R'$ ,  $COC(=O)NR'R''$  and  $C-NR'C(=O)OR'$  where  $R'$  and  $R''$  are individually hydrogen or lower alkyl;  $X'$  is nitrogen;  $A$ ,  $A'$  and  $A''$  individually are substituent species selected from the group consisting of  $N$ ,  $C-H$ ,  $C-F$ ,  $C-Cl$ ,  $C-Br$ ,  $C-I$ ,  $C-R'$ ,  $C-NR'R''$ ,  $C-CF_3$ ,  $C-OH$ ,  $C-CN$ ,  $C-NO_2$ ,  $C-C_2R'$ ,  $C-SH$ ,  $C-SCH_3$ ,  $C-N_3$ ,  $C-SO_2CH_3$ ,  $C-OR'$ ,  $C-SR'$ ,  $C-C(=O)NR'R''$ ,  $C-NR'C(=O)R'$ ,  $C-C(=O)R'$ ,  $C-C(=O)OR'$ ,  $C(CH_2)_qOR'$ ,  $C-OC(=O)R'$ ,  $COC(=O)NR'R''$  and  $C-NR'C(=O)OR'$  where  $R'$  and  $R''$  are individually hydrogen or lower alkyl;  $m$  is an integer and  $n$  is an integer such that the sum of  $m$  plus  $n$  is 1, 2, 3, 4, 5, 6, 7, or 8;  $E^I$ ,  $E^{II}$ ,  $E^{III}$ ,  $E^{IV}$ ,  $E^V$  and  $E^VI$  individually represent hydrogen, lower alkyl or halo substituted lower alkyl, such that at least one of  $E^I$ ,  $E^{II}$ ,  $E^{III}$ ,  $E^{IV}$ ,  $E^V$  and  $E^VI$  is not hydrogen;  $Z'$  and  $Z''$  individually are hydrogen or lower alkyl; and the wavy line in the structure indicates that the compound can have a cis (Z) or trans (E) form.

13. The method of Claim 12 whereby the compound has the trans (E) form.
14. The compound of Claim 12 wherein  $A$  is hydrogen.
15. The compound of Claim 12 wherein  $A$ ,  $A'$  and  $A''$  are all hydrogen.
16. The compound of Claim 12 wherein 1 or 2 of the substituents designated as  $E^I$ ,  $E^{II}$ ,  $E^{III}$ ,  $E^{IV}$ ,  $E^V$  and  $E^VI$  are non-hydrogen substituents.
17. The compound of Claim 12 wherein  $m$  plus  $n$  is 2 or 3.
18. The compound of Claim 12 wherein at least one of  $Z'$  and  $Z''$  are hydrogen.
19. The compound of Claim 12 wherein  $Z'$  is hydrogen and  $Z''$  is methyl.
20. The compound of Claim 12 selected from the group consisting of (4E)-N-methyl-5-(3-pyridyl)-4-penten-2-amine, (4E)-N-methyl-5-(5-pyrimidinyl)-4-penten-2-